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POLSTER, LIEDER, WOODRUFF & LUCCHESI
12412 POWERSCOURT DRIVE SUITE 200
ST. LOUIS, MO 63131-3615

EXAMINER

GARLAND, STEVEN R

ART UNIT PAPER NUMBER

2125

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,076

Applicant(s)

VOELLER, DAVID A.

Examiner

Steven R. Garland

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28, 29 and 31-35 is/are allowed.
- 6) ☒ Claim(s) 1-23, 25-27 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/12/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-23 and 25-35 are pending and claim 24 has been cancelled.
2. Claim 25 is objected to because of the following informalities: line 8, "signals" should be changed to --signal--. Note line 7. Appropriate correction is required.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is uncertain as to how many "acoustic signals" there are. Claim 1, line 5, refers to "at least one acoustic signal"; line 8 then , refers to "acoustic signals"; however then lines 10 and 11 both refer to "acoustic signal". While the phrase "at least one" allows for either one or plural signals the number of signals in a claim should be consistent i.e. at least one signal, a single signal, or plural signals. It is suggested that a consistent wording be used to indicate whether there is one or more signals.

The dependent claims fall with parent claim 1.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-8, 10,11, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casby et al. 6,085,428 in view of Newman, et al. 5,305,244.

Casby et al. teaches voice control of a wheel alignment device. Casby teaches use of a microphone, speaker, speech processing and speech generation, headset, wireless communication, central processing unit, software including software in a module, use of trigger words and phonetically distinct words such as passwords or trigger words, and audio associated with the alignment procedure. See the abstract; figures; col. 1, lines 10-16 and 40-67; col. 2, lines 7-11 and 31-67; col. 3, line 21 to col. 4, line 41; col. 5, line 5 to col. 6, line 6; and the claims.

Casby however fails to teach using the CPU to perform voice processing.

Newman et al. 5,305,244 teaches the alternatives of either a hardware implemented voice processing (fig. 5) or software implemented voice processing on the CPU (note element 522' fig.6 and its description). Newman teaches that this simplifies the number of hardware components. Newman also teaches the use of headset (figs. 1-2), an ear supported (contact) microphone 122 or that the microphone can be placed in contact with the throat (larynx, col. 3, lines 17-35). See the abstract; figures; col. 3, lines 17-35; col. 4, lines 50-60; col. 9, line 61 to col. 10, line 37; col. 11, lines 1-25; col. 15, lines 20-35; and the claims.

It would have been obvious to one of ordinary skill in the art to modify Casby in view of Newman to implement voice processing on the CPU by the use of software as taught by Newman and reduce the number of hardware components. This would simplify hardware construction and in turn reduce the cost of the hardware.

Further it would have been obvious to one of ordinary skill in the art to modify Casby in view of Newman and use a contact ear or throat microphone as taught by Newman. This would help prevent catching the headset/microphone on objects and reduce the risk of injury to the operator.

7. Claims 12-16, 21, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casby et al. 6,085,428 in view of Newman, et al. 5,305,244 as applied to claims 1-4, 6-8, 10,11, 22, and 23 above, and further in view of Kruger 5,692,059.

Casby et al. teaches voice control of a wheel alignment device. Casby teaches use of a microphone, speaker, speech processing and speech generation, headset, wireless communication, central processing unit, software including software in a module, turning on the system (use of switch col.5, line 34) use of trigger words and phonetically distinct words such as passwords or trigger words, and audio associated with the alignment procedure . See the abstract; figures; col. 1, lines 10-16 and 40-67; col. 2, lines 7-11 and 31-67; col. 3, line 21 to col. 4, line 41; col. 5, line 5 to col. 6, line 6; and the claims.

Casby however fails to teach using the CPU to perform voice processing.

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Art Unit: 2125

can be placed in contact with the throat (larynx, col. 3, lines 17-35). See the abstract; figures; col. 3, lines 17-35; col. 4, lines 50-60; col. 9, line 61 to col. 10, line 37; col. 11, lines 1-25; col. 15, lines 20-35; and the claims.

It would have been obvious to one of ordinary skill in the art to modify Casby in view of Newman to implement voice processing on the CPU by the use of software as taught by Newman and reduce the number of hardware components. This would simplify hardware construction and in turn reduce the cost of the hardware.

Further it would have been obvious to one of ordinary skill in the art to modify Casby in view of Newman and use a contact ear or throat microphone as taught by Newman. This would help prevent catching the headset/microphone on objects and reduce the risk of injury to the operator.

Casby and Newman however fail to teach the use of a contact microphone and air microphone or teach noise filtering.

Kruger teaches the use of an earpiece having a combination of a contact microphone for low frequencies and an air microphone to sense high speech frequencies. Kruger teaches that the combination reduces noise sensitivity and also teaches the use of noise filtering. See the abstract, figures, col. 1, lines 5-58; col. 3, lines 39-67; col. 4, lines 7-24; col. 5, line 18 to col. 6, line 57; and the claims.

It would have been obvious to one of ordinary skill in the art to modify Casby and Newman in view of Kruger and use the combination microphone of Kruger and use filtering to generate voice data in a noisy workshop environment and supply the combined signal having both the first and second audio data components to the CPU for

Art Unit: 2125

detecting the actual voice commands. This would reduce the chance of mistaking noise for a command and also allow for more reliable command detection in the noisy environment.

8. Claims 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casby et al. 6,085,428 in view of Kruger 5,692,059.

Casby et al. teaches voice control of a wheel alignment device. Casby teaches use of a microphone, speaker, speech processing and speech generation, headset, wireless communication, central processing unit, software including software in a module, use of trigger words and phonetically distinct words such as passwords or trigger words, and audio associated with the alignment procedure. See the abstract; figures; col. 1, lines 10-16 and 40-67; col. 2, lines 7-11 and 31-67; col. 3, line 21 to col. 4, line 41; col. 5, line 5 to col. 6, line 6; and the claims.

Casby however fails to teach the use of a contact microphone and air microphone.

Kruger teaches the use of an earpiece having a combination of a contact microphone for low frequencies and an air microphone to sense high speech frequencies. Kruger teaches that the combination reduces noise sensitivity and also teaches the use of noise filtering. See the abstract, figures, col. 1, lines 5-58; col. 3, lines 39-67; col. 4, lines 7-24; col. 5, line 18 to col. 6, line 57; and the claims.

It would have been obvious to one of ordinary skill in the art to modify Casby in view of Kruger and use the combination microphone of Kruger to generate voice commands in a noisy workshop environment.

In response to applicant's arguments, claim 27 requires the use of an audio processor not that the CPU be used to detect the voice commands as applicant appears to argue in the paragraph bridging pages 16 and 17.

9. Claims 5,9, and 17-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 28,29, and 31-35 are allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R. Garland whose telephone number is 571-272-3741. The examiner can normally be reached on Monday-Thursday.

Art Unit: 2125

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SRG

Steven R Garland
Examiner
Art Unit 2125

2/27/06



**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**